

## **REMARKS**

Applicant thanks Examiner Veillard and Examiner Rones for the courtesies extended in the personal interview conducted on December 9, 2003. Claims 1-51 are now pending in this application. Selected claims have been amended and new claims 44-51 have been added. No new matter is included. In view of the foregoing amendments and the following remarks, reconsideration and allowance of all claims pending in this application are respectfully requested.

### **Information Disclosure Statement**

Applicant respectfully notes that the Examiner has not returned a signed and initialed PTO form for the electronic Information Disclosure Statement (eIDS) filed February 2, 2004. Applicant respectfully requests the Examiner to acknowledge consideration of the references submitted in the electronic Information Disclosure Statement.

### **Claim Rejections under 35 U.S.C. §103**

Claims 1-43 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 4,956,774 to Shibamiya in view of U.S. Patent No. 5,754,493 to Al-Chalabi. Applicant traverses on the following basis.

Independent claim 1 has been amended to recite, *inter alia*, searching at least the hierarchical data lists, the hierarchical data containers, and the hierarchical data elements stored in the at least one database for data that matches the search request. Independent claims 11, 21, 31, and 41-43 have been amended to recite similar features. Shibamiya and Al-Chalabi, both alone and in combination with one another, fail to teach or suggest this feature.

One exemplary embodiment of the invention is directed to a system and method for searching a database for data that may be stored as a hierarchical data list (HDL), hierarchical data container (HDC), or a hierarchical data element (HDE) using statistical matching. Statistical curves may be determined for data described in a data request and stored data that satisfies the request. See specification at page 3, lines 22-24 and page 4, lines 5-12.

Another exemplary embodiment of the invention relates to using hierarchical data objects to store information. An HDL may include collections of HDEs and possibly other HDLs. An HDC is a particular type of HDE that comprises a name and pointers to a list of zero or more HDEs. This recursive data architecture enables complex hierarchies of data objects and enables data inheritance. See specification at page 4, lines 1-2; lines 14-15; and lines 23-27.

In a previous Office Action mailed September 4, 2003, the Examiner acknowledged that Shibamiya does not explicitly disclose hierarchical data. See September 4, 2003 Office Action, page 4, number paragraph 7. However, the Examiner appeared to draw an analogy between Shibamiya's B-tree and Applicant's hierarchical data list. See September 4, 2003 Office Action page 4, number paragraph 7.

Applicant submits that the portion of Shibamiya describing B-trees (column 1, line 64-column 2, line 9) merely discloses an index page that may have a hierarchical structure to enable more efficient scanning in a relational database system and is not directed to a database having data entries stored in a hierarchical structure. In particular, Shibamiya is deficient, at least because Shibamiya does not disclose hierarchical data including hierarchical data lists, hierarchical data containers, and hierarchical data elements. As a result, Shibamiya cannot teach or suggest *searching* at least the hierarchical data lists, the hierarchical data containers, and the hierarchical data elements stored in the at least one database for data that matches the search request. Rather, Shibamiya is directed to scanning an index for a relational database to determine an access path for a search query based on frequency statistics.

The Examiner also acknowledges that "Shibamiya does not teach a method wherein the request includes a predetermined tolerance and predetermined units; and generating a first statistical curve from data values derived from the requested data and the predetermined tolerance." See March 8, 2004 Office Action page 3, first paragraph.

The Examiner relies on Al-Chalabi for this feature. Al-Chalabi discloses a method of analyzing sonic data, including seismic and acoustic waves, obtained from wells and boreholes by generating time versus depth and velocity versus depth functions. See Al-Chalabi, abstract. Al-Chalabi does not disclose searching a database. Furthermore, Al-Chalabi does not disclose hierarchical data. Rather, Al-

Chalabi merely discloses a method of mathematical analysis of seismic velocity data points.

Since Al-Chalabi fails to disclose data stored in a hierarchical structure, Al-Chalabi does not provide the deficiencies of Shibamiya. Furthermore Al-Chalabi is not directed to databases and, for at least this reason, is not within the Applicant's field of endeavor and is non-analogous art. Applicant further submits that neither Shibamiya nor Al-Chalabi, set forth any legally proper teaching, suggestion, or motivation to combine the two references. Additionally, Applicant submits that no legally proper motivation or suggestion to combine Shibamiya or Al-Chalabi may be found in the knowledge generally available to those skilled in the art.

For the sake of argument, even if Al-Chalabi is considered to be analogous art and a legally proper suggestion or motivation to combine the two references is deemed to exist; the alleged combination of Shibamiya and Al-Chalabi remains deficient, because the references, taken both alone and in combination with one another, fail to teach or suggest at least the feature of searching at least the hierarchical data lists, the hierarchical data containers, and the hierarchical data elements stored in the at least one database for data that matches the search request.

For at least the foregoing reasons, Applicant submits that claims 1, 11, 21, 31, and 41-43 are patentable over Shibamiya and Al-Chalabi, both alone and in combination with one another. Furthermore, claims 2-10, 12-20, 22-30, 32-40, and 44-51 depend from one of the allowable independent claims and are patentable at least by virtue of their dependency.

#### **New Claims 44-51**

New dependent claims 44-51 have been added to capture features disclosed in the specification, but not previously claimed. As set forth above, claims 44-51 depend from one of the allowable independent claims and are patentable at least by virtue of their dependency.

Having addressed each of the foregoing rejections, it is respectfully submitted that a full and complete response has been made to the Office Action and, as such, the application is in condition for allowance. Notice to that effect is respectfully requested.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

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A handwritten signature in black ink, appearing to read 'Sean L. Ingram', written over a horizontal line.

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